

VEHICLE AND METHOD FOR CONTROLLING ENGINE START IN A VEHICLE

Abstract

A vehicle and method are provided that control engine start in the vehicle. The vehicle includes an electric machine operable to provide a starting torque to the engine. The vehicle also includes a battery capable of providing energy to operate the electric machine. A number of battery parameters are determined, including a discharge power limit, an output power, and an engine starting power level. The engine starting power level is related to the discharge power limit and an amount of output power for the battery necessary to operate the electric machine to provide the starting torque to the engine. When the output power of the battery is at or above the engine starting power level, the engine is automatically started.